

Claims

1. A photonic crystal fibre comprising a bulk material having an arrangement of longitudinal holes and a guiding core, wherein the fibre has an at most two fold rotational symmetry about a longitudinal symmetry wherein at least the inner rows of said longitudinal holes surrounding said guiding core follows a parallelogram shape arrangement of a minimum size corresponding to the arrangement of at least two of these longitudinal holes.
2. A photonic crystal fibre according to claim 1, wherein the edges defining the parallelogram are made by at least three holes rows.
3. A photonic crystal fibre according to claim 1, wherein said guiding core includes at least two longitudinal holes filled with material other than air.
4. A photonic crystal fibre according to claim 1, wherein at least a longitudinal hole is missing or filled with material other than air at the leading-edges of the parallelogram.
5. A photonic crystal fibre according to claim 1, wherein the asymmetry of said parallelogram is such that for a transmitted signal at around 1550nm said fibre shows a birefringence value of at least $3,4 \cdot 10^{-3}$.
6. A photonic crystal fibre according to claim 1, wherein said guiding core is doped with rare earth material.